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ABSTRACT

A review of research bearing on second language teaching methodology looks at what it tells about language processing and production, classroom interaction and second language learning, and learning strategy preferences. The perspective taken is that methodology consists of classroom tasks and activities. Implications of the research for the design of classroom tasks are then considered. Throughout, it is argued that language teaching methodology and materials should be based more firmly on empirical evidence about the nature of language, language learning, and language use. It is proposed that there exists much knowledge that can be exploited by materials designers and methodology experts to this end, and that there are areas into which research can be extended to broaden the knowledge base. In addition, a much closer relationship between research and teaching is recommended, implying both more interaction between teachers and researchers and greater teacher involvement in research. (MSE)

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AN EMPIRICALLY BASED METHODOLOGY FOR THE NINETIES

DAVID NUNAN

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AN EMPIRICALLY BASED METHODOLOGY FOR THE NINETIES

David Nunan

1 INTRODUCTION

In this paper, I shall survey the research which has been conducted in recent years which has implications for second language teaching methodology. This research can help us place the actual procedures we employ in the classroom on a much more secure footing, and can help to eliminate the pendulum effect which has bedeviled language teaching methodology over the years.

I have chosen to deal with the research under three main headings. First I shall look at what the research has to tell us about language processing and production. I shall then look at some of the work which has been done into classroom interaction and its effect on second language acquisition. Finally, I shall review the literature on learning strategy preferences. In this third area, the pertinent questions are: what methodological preferences do learners themselves have? and, what are the implications of these learning preferences for language teaching methodology?

In the Longman Dictionary of Applied Linguistics, methodology is defined as follows:

> (1) ... the study of the practices and procedures used in teaching, and the principles and beliefs that underly them. Methodology includes:
> (a) study of the nature of LANGUAGE SKILLS (eg reading, writing, speaking, listening) and procedures for teaching them
> (b) study of the preparation of LESSON PLANS, materials, and textbooks for teaching language skills
> (c) the evaluation and comparison of language teaching METHODS (eg the AUDIOLINGUAL METHOD)
> (2) such practices, procedures, principles, and beliefs themselves. One can, for example criticize or praise the methodology of a particular language course. (Richards, Platt and Weber, 1985: 177)

Traditionally, in language teaching pedagogy, a distinction has been drawn between syllabus design and methodology, the former concerning itself with the selection and grading of linguistic and experiential content, while the latter is

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concerned with the selection and sequencing of learning tasks and activities. In other words, syllabus design is concerned with 'what', 'why' and 'when'; methodology is concerned with 'how'. However, with the development of communicative approaches to language teaching, the traditional distinction between syllabus design and methodology has become difficult to sustain. As Breen points out, while syllabus design, as traditionally conceived, is concerned with the learner's destination, communicatively oriented syllabuses should:

> "... prioritize the route itself; a focusing upon the means towards the learning of a new language. Here the designer would give priority to the changing processes of learning and the potential of the classroom - to the psychological and social resources applied to a new language by learners in the classroom context ... a greater concern with capacity for communication rather than repertoire of communication, with the activity of learning a language viewed as important as the language itself, and with a focus upon the means rather than predetermined objectives, all indicate priority of process over content." (Breen, 1984: 52-3)

(For a detailed account of the effect of communicative language teaching on syllabus design and methodology, see Nunan, 1988a and Nunan, 1989).

For the purposes of this paper, I shall consider methodology from the perspective of classroom tasks and activities. The principal question addressed in the paper is: what does research have to say about language learning and use, and what are the implications of this research for the design of classroom tasks?

The very question itself marks a departure from the approach which has characterized methodology for much of this century. As Richards (1987) points out, the goal of many language teachers is to 'find the right method'. "... the history of our profession in the last hundred years has done much to support the impression that improvements in language teaching will come about as a result of improvements in the quality of methods, and that ultimately an effective language teaching method will be developed." He goes on to say that for many years it was believed that linguistic or psycholinguistic theory would uncover the secrets of second language acquisition, and then the problem of how to teach a second language would be solved once and for all.

Despite their diversity, all "methods" have one thing in common. They all assume that there is a single of set of principles which will determine whether or not learning will take place. Thus, they all propose a single set of precepts for teacher and learner classroom behaviour, and assert that if these principles are faithfully followed, they will result in learning for all. Unfortunately, little evidence has been forthcoming over the years to support one approach rather than another, or to suggest that it is the method rather than some other variables which caused learning to occur.

These 'designer' methods, which can be bought off the applied linguistics shelf, contain inbuilt assumptions and beliefs about the nature of language and learning. These beliefs reflect the dominant psychological and linguistic orthodoxies of the time during which the methods gained currency.

Most of these designer methods, are based on assumptions drawn, not from the close observation and analysis of the classroom, but from logico-deductive speculation. An alternative to them is the development of language teaching methodologies which are based, at least in part, on empirical evidence on the nature of language, language learning and language use. It is to a critical analysis of such evidence that I now turn.

2 RESEARCH INTO LANGUAGE PROCESSING AND PRODUCTION

There is a growing body of literature on language learning and use by both first and second language learners which can be drawn on by methodologists in the process of formulating principles for the design of classroom materials and learning tasks. In this section, I shall review a selection of the literature which speaks most readily to the concerns of second language education.

In terms of language processing, it is now generally accepted that learners need access to both top-down as well as bottom-up processing strategies. Bottom-up processing strategies focus learners on the individual components of spoken and written messages, that is, the phonemes, graphemes, individual words and grammatical elements which need to be comprehended in order to understand these messages. Top-down processing strategies, on the other hand, focus learners on macro-features of text such as the writer or speaker's purpose, the topic of the message and so on.

In comprehending spoken messages, it has been suggested that learners need the following bottom-up and top-down strategies:

Bottom-up listening strategies:
- scanning the input to identify familiar lexical items;
- segmenting the stream of speech into constituents, for example, in order to recognise that 'abookofmine' consists of four words;
- using phonological cues to identify the information focus in an utterance;
- using grammatical cues to organize the input into constituents, for example, in order to recognise that in 'the book which I lent you' (the book) and (which I lent you) are major constituents, rather than (the book which I) and (lent you).

Top-down listening strategies:

- assigning an interaction to part of a particular event, such as story telling, joking, praying, complaining;
- assigning person, places and things to categories;
- inferring cause and effect relationships;
- anticipating outcomes;
- inferring the topic of a discourse;
- inferring the sequence between events;
- inferring missing details. (Richards, 1987)

Until fairly recently, the focus in the language classroom was firmly on the development of bottom-up processing strategies. However, in recent years, the need for a balance between both types of strategy has been recognised.

Anderson and Lynch (1988) record an anecdote which illustrates the importance of top-down strategies to successful listening comprehension. An old woman, passing one of the authors in the street said, "That's the university. It's going to rain." At first, the listener had no idea what the woman was trying to say.

You might like to pause and consider what you think the woman meant. You might also like to consider what you would need to know about the speaker, the listener, the time, the place and so on in order to construct an interpretation of the woman's utterance.

The listener had to draw on the following information, none of which is actually contained in the message itself:

general factual information:

1. sound is more audible downwind than upwind
2. wind direction may affect weather conditions

local factual knowledge:

3. the University of Glasgow has a clock tower with a bell

socio-cultural knowledge:

4. strangers to Britain occasionally refer to the weather to 'oil the wheels' of social life
5. a polite comment from a stranger usually requires a response

knowledge of context:

6. the conversation took place about half-a-mile from the University of Glasgow
7. the clock tower bell was just striking the hour.

(Anderson and Lynch, 1988: 12-13)

By drawing on these various sources of knowledge, the listener was able to conclude that the old woman was drawing his attention to the fact that the wind was blowing from a direction which brought with it the threat of rain. The change in the wind direction was signalled by the fact that the university clock was audible. The woman was, in fact, making a socially acceptable comment to a stranger, ie talking about the weather, although she chose a rather idiosyncratic way of doing it.

Similar issues and factors to those we have seen in relation to listening comprehension also appear in the research into reading comprehension. For quite a few years, there has been a lively debate over the relative claims of bottom-up and top-down approaches to reading comprehension. The central notion behind the bottom-up approach is that reading is basically a matter of decoding a series of written symbols into their aural equivalent. According to this approach, the reader processes every letter as it is encountered. These letters or graphemes are matched with the phonemes of the language, which it is assumed the reader already knows. These phonemes, the minimal units of meaning in the sound system of the language, are blended together to form words. The derivation of meaning is thus the end process in which the language is translated from one form of symbolic representation to another.

A number of major criticisms have been made of the phonics approach. Much of this criticism is based on research into human memory. The first of these is that, with only twenty-six letters and over forty sounds in English, spelling-to-sound correspondences are both complex and unpredictable. It was this realization which led to the development of primers, in which stories were composed exclusively of words which did have regular sound-symbol correspondences. Unfortunately, as many of the most common English words have irregular spellings and were therefore excluded, the stories in primers tended to be unnatural and tedious.

Another criticism which has grown out of empirical investigations into human cognition and memory is that the serial processing of each letter in a text would slow reading up to the point where it would be almost impossible for meaning to be retained. Research by Kolers and Katzmann (1966), for example, demonstrated that it takes from a quarter to a third of a second to recognise and assign the appropriate phonemic sound to a given grapheme. At this rate, given the average length of English words, readers would only be able to process about sixty words per minute. In fact, it has been demonstrated that the average reader can read and comprehend from 250-350 words per minute. Given the fact that we can only hold in working memory about seven items at any one time, the reader should, under the bottom-up model, very often forget the beginning of a sentence before reaching the end.

More recent interactive models of reading give much greater prominence to top-down reading strategies, which obviate some of the shortcomings of a purely

bottom-up approach.

The importance of top-down knowledge to comprehension is illustrated in the following passage.

> "The procedure is really quite simple. First you arrange things into different groups. Of course, one pile may be sufficient, depending on how much there is to do. If you have to go somewhere else due to lack of facilities that is the next step, otherwise you are pretty well set. It is important not to overdo things. That is, it is better to do too few things at once than too many. In the short run this may not seem important, but complications can easily arise. A mistake can be expensive as well. At first the whole procedure will seem complicated. Soon, however, it will become just another facet of life. It is difficult to see any end to the necessity for this task in the immediate future, but then one can never tell. After the procedure is completed, one arranges the materials into different groups again. Then they can be put into their appropriate places. Eventually they can be used once more, and the whole cycle will then have to be repeated. However, that is a part of life." (Bransford and Johnson, 1972)

This passage is almost impossible to process, until one has an organizing framework or schema. Such a schema is provided by the title of the passage: 'Washing Clothes'!

The importance of interactive approaches to second language reading has been demonstrated in a growing body of empirical research. Nunan (1984), for example, found that the lack of appropriate background knowledge was a more significant factor in the ability of second language learners to comprehend school texts than linguistic complexity as measured by various readability formulae. Carrell et al (1988) also contains a wealth of data on the significance of interactive models of reading for second language reading programs.

It is worth noting that for most of its history, language teaching has focused on written language. It is only comparatively recently that the focus has turned to spoken language. Interest in spoken language was kindled, among other things, with the development of tape recorders which made it possible for researchers to record, transcribe and study in detail oral interactions between people. This research highlighted some of the contrasts between spoken and written language. Thus, while written texts are characterised by well formed sentences which are integrated into highly structured paragraphs, spoken language consists of shorts, fragmentary utterances in a range of pronunciations. There is often a great deal of repetition and overlap between one speaker and another, and speakers frequently use non-specific references. (They are more likely to say 'it' and 'this' than 'the left-handed monkey wrench' or 'the highly perfumed French poodle on the sofa'.)

Brown and Yule (1983) suggest that in contrast with the teaching of written language, teachers concerned with teaching the spoken language must confront the following types of questions:

- What is the appropriate form of spoken language to teach?
- From the point of view of pronunciation, what is an appropriate model?
- How important is pronunciation?
- Is it any more important than teaching appropriate handwriting in the foreign language?
- If so, why?
- From the point of view of the structures taught, is it all right to teach the spoken language as if it were exactly like the written language, but with a few 'spoken' expressions thrown in?
- Is it appropriate to teach the same structures to all foreign language students, no matter what their age is or their intentions in learning the spoken language?
- Are those structures which are described in standard grammars the structures which our students should be expected to produce when they speak English?
- How is it possible to give students any sort of meaningful practice in producing spoken English?

Brown and Yule also distinguish between two basic language functions. These are the transactional function (which is primarily concerned with the transfer of information) and the interactional function (in which the primary purpose is to maintain social relationships).

Another basic distinction is between monologues and dialogues. The ability to give an uninterrupted oral presentation is a different skill from interacting with one or more speakers for transactional and interactional purposes.

Researchers undertaking conversational and interactional analysis have also shown that interactions do not unfold neatly like textbook dialogues, and that meanings are not ready made. Participants have to work together to achieve mutual understanding, and conversational skills include the ability to negotiate meaning with one's interlocutors. These are skills which learners must acquire, just as they must acquire lexical and morphosyntactic knowledge.

There is also a growing body of research into the development of writing skills. Bell and Burnaby (1984) point out that writing is an extremely complex cognitive activity which requires the writer to demonstrate control of several variables at once. At the sentence level, these include control of content, format, sentence structure, vocabulary, pronunciation, spelling and letter formation. Beyond the sentence, the writer must be able to structure and integrate information into cohesive and coherent paragraphs and texts. These discourse level

skills are probably the most difficult of all to master, not only for foreign language learners, but for native speakers as well.

Some of the most interesting work on the development of writing skills is being carried out by researchers investigating the development of writing in first language users and using Halliday's systemic-functional model as their theoretical framework. (See, for example, Martin, 1985).

I shall summarise this section by setting out some of the skills which research shows learners need if they are to become successful users of the language. These have been extracted from Nunan (1989).

In relation to listening, learners need:
- skills in segmenting the stream of speech into meaningful words and phrases;
- recognising word classes;
- relating the incoming message to one's own background knowledge;
- identifying the rhetorical and functional intent of an utterance or parts of an aural text;
- interpreting rhythm, stress and intonation to identify information focus and emotional/attitudinal tone;
- extracting gist/essential information from longer aural texts without necessarily understanding every word. (Nunan, 1989: 23)

Successful reading involves:
- using word attack skills such as identifying sound/symbol correspondences;
- using grammatical knowledge to recover meaning, for example interpreting non-finite clauses;
- using different techniques for different purposes, for example skimming and scanning for key words or information;
- relating text content to one's own background knowledge of the subject at hand;
- identifying the rhetorical or functional intention of individual sentences or text segments, for example recognising when the writer is offering a definition or a summary, even when these are not explicitly signalled by phrases such as 'X may be defined as ... . (op cit: 35)

In relation to speaking and oral interaction, learners need:
- the ability to articulate phonological feature of the language comprehensively;
- mastery of stress, rhythm, intonation patterns;
- an acceptable degree of fluency;
- transactional and interpersonal skills;

- skills in taking short and long speaking turns;
- skills in the management of interaction;
- skills in negotiating meaning;
- conversational listening skills (successful conversations require good listeners as well as good speakers);
- skills in knowing about and negotiating purposes for conversations;
- using appropriate conversational formulae and fillers. (op cit: 32)

Finally, successful writing involves:
- mastering the mechanics of letter formation;
- mastering and obeying conventions of spelling and punctuation;
- using the grammatical system to convey one's intended meaning;
- organising content at the level of the paragraph and the complete text to reflect given/new information and topic/comment structures;
- polishing and revising one's initial efforts;
- selecting an appropriate style for one's audience. (op cit: 37)

3 RESEARCH INTO CLASSROOM INTERACTION AND ACQUISITION

In the preceding section, I reviewed what is currently known about the nature of language in use. In order to develop an effective, empirically based methodology for the nineties, this knowledge needs to inform and guide research into experimental design which is aimed at where the action is: that is, in the classroom itself.

I believe that the concept of 'task' can provide coherence to research agenda aimed at putting language teaching methodology on a more secure empirical footing. Those of you who attended my presentation at last year's seminar will recall that I defined communicative tasks as follows:

> "... a piece of classroom work which involves learners in comprehending, manipulating, producing or interacting in the target language while their attention is principally focused on meaning rather than form. The task should also have a sense of completeness, being able to stand alone as a communicative act in its own right." (Nunan, 1989: 10)

Tasks can be typified in many different ways. I have provided the following typification:

> "... in analytic terms, tasks will contain some form of input data which might be verbal (for example, a dialogue or reading passage) or non-verbal (for

example, a picture sequence) and an activity which is in some way derived from the input and which sets out what learners are to do in relation to the input. The task will also have (implicitly or explicitly) a goal and roles for teachers and learners." (ibid)

This schema which is set out in the accompanying diagram, can be utilized in the development of a coherent research program. The table following the diagram indicates some of the research issues which might be amenable to investigation. There is almost no limit to the number of investigations. Table 1 gives some idea of what these might look like.

Figure 1: Task elements (from Nunan, 1989)

Table 1: Task elements and sample research issues

ELEMENT	ISSUE
Goal	Effect of goal/input/activity mismatch on learning outcomes.
Input/data	Input genre and task difficulty. Speech processing constraints and task difficulty.
Activity	Effect of L1 modelling/formal instruction on output. Relationships between learning preferences and activity types. Negotiation of meaning and learning outcomes.
Teacher role	Relationship between teacher role variation and output.
Student role	Relationship between student role variation and output.
Setting	Effect of different grouping patterns on student output.

There is, in fact, a large and growing body of literature in which 'task' features as a central element. Given constraints of time, I can do little more than provide illustrative examples of some of this research.

SLA research can be divided into that which focuses on outcomes or learning products, and than which focuses on learning processes, or the means by which outcomes are achieved. Here, I shall focus on process-oriented studies, a selection of which are summarised in Table 2 which has been extracted from Nunan (1987).

In an early study, Long et al (1976) investigated the language used by adult learners when working in small groups in contrast with teacher-fronted tasks. They found that small group work prompted learners to adopt more roles and to use a greater range of language functions than teacher fronted tasks.

Bruton and Samuda (1980) working once again with adult ESL learners, found that when working in groups or pairs, learners are quite capable of correcting one another successfully.

In the first of a series of studies into the efficacy of communicative, information gap tasks, Long (1981) found that two-way tasks prompted more negotiation of meaning than one-way tasks. (Two-way tasks are those in which each participant has unique information which must be shared for the task to be

Table 2: Some process-oriented SLA studies

STUDY	SUBJECTS	DATA	RESULTS
Long, Adams McLean and Castanos (1976)	Adult ESL	Classroom transcripts	Groupwork prompts students to adopt more roles and use a greater range of language functions than teacher-fronted activities
Bruton and Samuda (1980)	Adult ESL	Classroom transcripts	Learners are capable of correcting each other successfully
Long (1981)	Adult ESL N Speakers	Conversation transcripts	Two-way tasks prompt significantly more conversational adjustments by NS than one-way tasks
Porter (1983)	Adult ESL 3 prof. levels	Conversation transcripts	Learners produce more talk with other learners than NS partners. Learners do not produce more errors when speaking with other learners
Varonis and Gass (1985)	Adult ESL	Conversation transcripts	most negotiation of meaning occurs when NNS are from different language backgrounds and proficiency levels
Brock (1986)	24 non-native speakers	Transcripts from teacher-fronted tasks	User of referential questions prompted sig. longer and more syntactically complex responses containing more connectives
Doughty and Pica (1986)	Adult ESL	Classroom transcripts	Required information exchange tasks generated significantly more interactional modifications than optional information exchange tasks. Small groups prompted significantly more modified interaction than teacher-fronted tasks
Duff (1986)	Adult ESL	Classroom transcripts	Convergent (problem-solving) tasks produce more negotiations than divergent (debating) tasks.
Long and Crookes (1986)	H. School LEP students	Classroom transcripts	Use of referential questions prompted greater mastery of content (not sig. but trend was in this direction)
Nunan (1987)	Adult ESL beginners	Conversation transcripts	Use of referential questions prompts negotiation of meaning

completed successfully. In one-way tasks, one of the participants has all of the information.) Long argues that the more negotiation, the greater the potential of the task to stimulate acquisition.

In an investigation of the effect of conversational partners on output, Porter (1983) found that learners produce more talk when carrying out a communication task with other learners than with native speakers. She also found (and this should be reassuring to those who worry about learners getting poor models from each other) that learners do not 'learn' each other's mistakes.

Brock (1986) found when teachers asked referential questions (ie those to which they do not know the answer) learners respond with significantly longer and syntactically more complex utterances than when responding to display questions.

In a follow up study to Long's work on one- and two-way tasks, Doughty and Pica (1986) found that two-way tasks generated significantly more modified interaction than one-way tasks. Significantly more modified interaction was also produced in small group work than in teacher-fronted tasks.

Duff (1986) came up with the hardly surprising discovery that convergent tasks (such as problem-solving) produced more negotiation of meaning than divergent tasks (such as debates).

Long and Crookes (1986) found that the use of referential questions resulted in learners mastering more of the content of their lessons than when display questions were used.

Varonis and Gass (1985) found that most negotiation of meaning occurs when learners are put into small groups with other learners who are from different language backgrounds and proficiency levels.

Finally, Nunan (1987) found that the use of referential questions prompted more negotiation of meaning, and that the discourse produced by learners more closely resembled that occurring outside the classroom. For example, learners initiated topics, they contradicted the teacher, and used more complex language when responding the referential rather than display questions.

While many criticisms can and have been made of many of these studies, they provide a powerful impetus for communicative, task oriented approaches to language learning in which classroom methodology is orchestrated around patterns of organisation which maximize interaction.

4 LEARNING STRATEGY PREFERENCES

The final area I wish to look at, where empirical research has something to say to methodologists, is in the branch of cognitive psychology which has investigated learning styles and strategies. Within the context of a learner-oriented approach to curriculum design, the issue of learners' preferences becomes cru-

cially important. Learner-centred curricula

> ... contain similar elements to those contained in traditional curriculum development, that is planning (including needs analysis, goal and objective setting), implementation (including methodology and materials development) and evaluation ... However, the key difference between learner-centred and traditional curriculum development is that, in the former, the curriculum is a collaborative effort between teachers and learners, since learners are closely involved in the decision-making process regarding the content of the curriculum and how it is taught. (Nunan, 1988b: 2)

One of the major outcomes of communicative learning teaching is that it has created the potential for massive mismatches in the expectations of teachers and learners. (For an excellent introduction to the problems and solutions relating to learner and teacher roles in the communicative classroom, see Wright, 1987).

A series of investigations reported in Nunan (1988b) into the learning preferences of learners and the teaching preferences of teachers revealed large mismatches in the respective expectations and preferences of teachers and learners. The mismatches need to be dealt with through processes of negotiation and explanation.

In a major study into the learning preferences of adult ESL learners, Willing (1988) came to a number of interesting conclusions. Willing's survey instrument learning group, aspects of language, sensory-modality options and 'outside class' activities. Learners, who were provided with first language assistance where necessary, rated these on the four point scale.

A post hoc factor analysis revealed patterns of variation in the responses with evidence for the existence of four different learner 'types'. These are as follows:

> 'Concrete' learners: These learners preferred learning by games, pictures, films and video, talking in pairs, learning through the use of cassettes and going on excursions.

> 'Analytical' learners: These learners liked studying grammar, studying English books, studying alone, finding their own mistakes, having problems to work on, and learning through reading newspapers.

> 'Communicative' learners: This group liked to learn by observing and listening to native speakers, talking to friends in English, watching TV in English, using English in shops etc, learning English words by hearing them, and learning by conversations.

- 'Authority-oriented' learners: These students liked the teacher to explain everything, writing everything in a notebook, having their own notebook, learning to read, studying grammar and learning English words by seeing them.

One of Willing's major aims was to look for correlations between such biographical variables as age, ethnicity, educational background etc. A surprising outcome of the research was that:

> "... none of the learning differences as related to personal variables were of a magnitude to permit a blanket generalization about the learning preference of a particular biographical sub-group. Thus, any statement to the effect that 'Chinese are X', or 'South Americans prefer Y', or 'Younger students like Z', or 'High-school graduates prefer Q', is certain to be inaccurate. The most important single finding of the study was that for any given learning issue, the typical spectrum of opinions on that issue were represented, in virtually the same ratios, within any biographical sub-group." (Willing, 1988: 150-151)

The thrust of much of the research into learning styles and strategies has been to identify those characteristics which typify the 'good' language learner. Rubin and Thompson (1983) suggest that 'good' or efficient learners tend to exhibit the following characteristics as they go about learning a second language.

1. Good learners find their own way.
2. Good learners organise information about language.
3. Good learners are creative and experiment with language.
4. Good learner make their own opportunities, and find strategies for getting practice in using the language inside and outside the classroom.
5. Good learners learn to live with uncertainty and develop strategies for making sense of the target language without wanting to understand every word.
6. Good learners use mnemonics (rhymes, word associations etc to recall what has been learned.)
7. Good learners make errors work.
8. Good learners use linguistic knowledge, including knowledge of their first language in mastering a second language.
9. Good learners let the context (extra-linguistic knowledge and knowledge of the world) help them in comprehension.
10. Good leaners learn to make intelligent guesses.
11. Good leaners learn chunks of language as wholes and formalised routines to help them perform 'beyond their competence'.

12. Good learners learn production techniques (eg techniques for keeping a conversation going).
13. Good learners learn different styles of speech and writing and learn to vary their language according to the formality of the situation.

In a study of 44 'good' learners of English as a foreign language in South-east Asia, Nunan (1988c) was forced to conclude that certain strategy preferences did seem to typify the 'good' language learner. He states that:

> "The most striking thing about this study was the fact that, despite the diverse contexts and environments in which the subjects learned English, practically all agreed that formal classroom instruction was insufficient. Motivation, a preparedness to take risks, and the determination to apply their developing language skills outside the classroom characterised most of the responses from these 'good' language learners. The free-form responses reinforced the general pattern of responses provided by the questionnaire. Given the homogeneity of responses, it is clear that we cannot reject the notion that there is a correlation between certain learning strategy preferences and the 'good' language learner."

These studies have obvious implications for pedagogy. In particular, we need to develop strategies for learner training, and follow-up research needs to be conducted to determine whether learners who are by nature not particularly effective can be taught these 'good' learning strategies.

5 RESEARCH AND THE TEACHER

There is one final aspect of an empirical approach to methodology which I would like to refer to now. This is the involvement of the teacher in classroom research. This is not a new idea, of course. As far back as 1975, Stenhouse argued that it was not enough for teachers work to be researched. They need to research it themselves. More recently, Larsen-Freeman and Long have written:

> "There is a growing amount of attention these days being given to teacher-initiated ***action research*** whose intent is to help gain new understanding of and, hence, enhance their teaching. "Action research usually involves a cycle of self-observation or reflection, identification of an aspect of classroom behaviour to be investigated, and selection of appropriate procedures to investigate and interpret behaviour".
>
> (*Teacher Education Newsletter* 4, 2, Fall, 1988)

"The attention action research is receiving gives us cause for optimism. We hope that someday all language teacher preparation programs will implement a "train-the-teacher-as-classroom-researcher" component (Long, 1983). If such a development were to ensue, eventually we might find language teachers less vulnerable to the vicissitudes of language teaching fashion and more willing to rely on the power of their own research."

(Larsen-Freeman and Long forthcoming)

6 CONCLUSION

In this paper, I have argued that language teaching methodology needs to be placed on a more secure empirical footing. Materials, learning tasks and pedagogic exercises need to be based, not on ideology or dogma, as is too often the case now, but on evidence and insights into what makes learners tick. I have tried to show that a considerable body of knowledge already exists and can be readily exploited by materials designers and methodologists. I have also indicated ways in which current research can be extended by a research agenda based on the organizing principle of the pedagogic task.

In the long run, research will only be effective to the extent that it is embraced by teachers. Therefore, there needs to be a much closer relationship between teaching and research and between teachers and researchers, and teachers themselves need to be involved in the research process. Such involvement is consonant with the vision of Barnes, who said:

"... to frame the questions and answer them, we must grope towards our invisible knowledge and bring it into sight. Only in this way can we see the classroom with an outsider's eye but an insider's knowledge, by seeing it as if it were the behaviour of people from an alien culture. Then, by an act of imagination we can both understand better what happens and conceive of alternative possibilities." (Barnes, 1975: 13)

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